Appl. No. 09/825,200   Attorney Docket No. 81800.0153
Amdt. Dated December 3, 2003   Customer No.: 26021
Reply to Office Action of September 9, 2003

REMARKS/ARGUMENTS

In response to the Office Action dated March 6, 2003, claims 1, 9, and 17 are amended, and claims 2 and 3 are canceled without prejudice or waiver. Claims 1, 4, 5, and 6 remain in the application. It is not the Applicants' intent to surrender any equivalents because of the amendments or arguments made herein. Reexamination and reconsideration of the application are respectfully requested.

Objection to the Specification

In paragraph 4 of the Office Action, the title was considered not descriptive.

The applicant thanks the Examiner and has amended the title to be more descriptive of the present invention. It is believed that no new matter has been added.

Non-Statutory Objections

In paragraph 5 of the Office Action, claims 1, 9, and 17 were objected to because of some claim term informalities.

The Applicants thank the Examiner and have amended the claims as requested in the Office Action.

Non-Art-Based Rejections

In paragraph 6 of the Office Action, claims 9-16 were rejected under 35 U.S.C. § 101, because the claims were directed to an algorithm not embedded in a computer readable medium.

Applicant respectfully traverses the rejections, but, in order to expedite prosecution of the application, has amended the claims to overcome the rejection.

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Applicant believes that any amendments made under this section merely clarify the claim language, and do not surrender any equivalents because of such amendments. It is not Applicant's intent to surrender any equivalents due to amendments made which may touch upon these rejections.

Art-Based Rejections

In paragraph 7 of the Office Action, claims 1-8 and 17-24 were rejected under 35 U.S.C. § 103(a) as being anticipated by Soumiya et al., USPN 5,761,217 in view of Yoshida, USPN 6,046,825.

The Applicant respectfully traverses the rejections, however, in order to expedite prosecution, the Applicants have amended the claims for clarification. The Applicants respectfully submit that the claims are patentable in light of the clarifying amendments above and the arguments below.

The Soumiya Reference

The Soumiya reference discloses a method for recovering errors with data communication. A CPU 1 controls the operations of the entire facsimile device. ROM 2 stores the programs and the like necessary for the operations of the CPU 1. RAM 3 temporarily memorizes various types of information of the received data and the like. NCU 4 controls the connection to the telephone lines. Modem 5 carries out modulation of image data to be transmitted and demodulation of received image data. See Col. 3, line 66-Col. 4, line 8.

The modem 5 carries out modulation in accordance with a multi phase differentially encoded modulation method of recommendation V.27ter of the ITU. See Col. 4, lines 15-18. The CPU 1 includes an error r cov ry means. When an

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error line is detected during decoding of the coded data, the error recovery means
corrects the error line and recovers the correct line data. In concrete terms, data of
error correction patterns as shown in FIG. 7A/B are pre-memorized in the ROM 2.
See Col. 6, lines 40-45.

The Yoshida Reference

The Yoshida reference discloses a facsimile apparatus controlling
communication in accordance with registered execution of the error correction
mode. The modem 8 modulates the coded data supplied from the control circuit via
the signal line 20b to generate a modulated signal and also demodulates the
received signal taken from the hybrid circuit 6 via a signal line 6a to generate
demodulated data. The modulation and demodulation processes are conducted in
accordance with the ITU-T Recommendations V.21, v.27ter, v.29, v.17, v.8, and
v.34. The contents of the modulation and demodulation processes by the modem 8
are instructed by the signal supplied by the control circuit 20 through a signal line
20c and the transmission mode is determined by the instructed modulation and
demodulation processes. The signals supplied from the control circuit 20 to the
modem 8 through the signal line 20c are those for specifying the transmission mode,
the reception mode, and the transmission speeds. See Col. 2, line62-Col. 3, line 9.

The registered information may comprise information indicative of the
execution of the ECM for the transmission speeds. Because of the possibility of poor
line conditions, it is determined that the communication at the transmission speeds
of 14.4 Kb/s and 12 Kb/s is allowed when a check result indicates a good line
condition, and the ECM communication is conducted at those speeds. If the check
result indicates a bad line condition, it is determined that the communication is
permitted at the transmission speeds of 9.6 Kb/s or below and the normal

communication without the ECM added is conducted to prevent the extension of the communication time due to the data retransmission by the ECM communication. See Col. 4, lines 24-39.

The Claims are Patentable over the Cited Reference

The claims of the present invention describe a communication terminal device having an error correction function. A device in accordance with the present invention comprises a modem that can transmit data to a remote device in accordance with a plurality of modulation methods and communication speeds, and a controller for changing a current modulation method of the modem to a different modulation method when an all-frame-error is detected predetermined number of times during data transmission, and for maintaining the current modulation method and reducing a communication speed when a frame error other than the all-frame-error is detected a second predetermined number of times.

The cited references do not teach nor suggest the limitations of the claims of the present invention. Specifically, the cited references do not teach nor suggest the limitation of changing a current modulation method of the modem to a different modulation method when an all-frame-error is detected predetermined number of times during data transmission, and for maintaining the current modulation method and reducing a communication speed when a frame error other than the all-frame-error is detected a second predetermined number of times as recited in the claims of the present invention.

The Soumiya reference teaches that error correction is done by memorization of error patterns and done on a line-by-line basis. When an error line is detected during decoding of the coded data, the error recovery means corrects the error line and recovers th correct line data. In concrete terms, data of error correction

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patterns as shown in FIG. 7A/B are pre-memorized in the ROM 2. See Soumiya, Col. 6, lines 40-45.

The Yoshida reference teaches that the error correction is done by pre-testing the transmission line for the conditions that the transmission line can support. Because of the possibility of poor line conditions, it is determined that the communication at the transmission speeds of 14.4 Kb/s and 12 Kb/s is allowed when a check result indicates a good line condition, and the ECM communication is conducted at those speeds. If the check result indicates a bad line condition, it is determined that the communication is permitted at the transmission speeds of 9.6 Kb/s or below and the normal communication without the ECM added is conducted to prevent the extension of the communication time due to the data retransmission by the ECM communication. See Yoshida, Col. 4, lines 24-39.

Neither reference teaches changing a current modulation method of the modem to a different modulation method when an all-frame-error is detected predetermined number of times during data transmission. Soumiya does not teach changing modulation methods at all, and Yoshida teaches changing transmission speeds pre-transmission, not modulation methods during transmission as recited in the claims.

Further, neither reference teaches maintaining the current modulation method and reducing a communication speed when a frame error other than the all-frame-error is detected a second predetermined number of times; Soumiya does not teach changing speeds at all, and Yoshida teaches changing the communication speed based on a pre-transmission line test, not on the number of times a frame-error is detected as recited in the claims of the present invention.

The use of error detection during transmission as recited in the claims of the present invention allows for optimizing transmission speeds during the

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transmission while keeping transmission errors to a minimum. Neither reference teaches nor suggests this advantage.

Thus, it is submitted that independent claims 1, 9, and 17 are patentable over the cited references. Claims 2-8, 10-16, and 18-24 are also patentable over the cited reference, not only because they contain all of the limitations of the independent claims, but because claims 2-8, 10-16, and 18-24 also describe additional novel elements and features that are not described in the prior art.

Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

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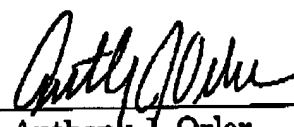Reply to Office Action of September 9, 2003

If for any reason the Examiner finds the application other than in condition
for allowance, the Examiner is requested to call the undersigned attorney at the Los
Angeles, California telephone number (213) 337-6742 to discuss the steps necessary
for placing the application in condition for allowance

If there are any fees due in connection with the filing of this response, please
charge the fees to our Deposit Account No. 50-1314.

                                        Respectfully submitted,
                                        HOGAN & HARTSON L.L.P.

Date: December 3, 2003

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